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COUNTRY International

SUBJECT Recent Developments in the World Electricity Situation

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1. World production of electric power reached a new peak in 1952, at 1,139 billion kilowatt hours. This figure was 8% more than estimated output in 1951, the previous record, and more than 2½ times the volume produced in 1937.

2. In Europe and Asia hydro and thermal production grew at an equal rate, but in North America, thermal output has increased far more rapidly than hydro since 1937. Because of the relative weight of North America's output in the world total, hydro electricity, which accounted for 41% of world electricity production in 1937, accounted for only 35% in 1952. In the USSR, despite intensive efforts to increase hydro capacity, it now provides only 14% of electrical energy requirements.

3. In 1952, thermal power plants consumed the equivalent of some 400 million metric tons of coal, roughly one-sixth of the world's entire production of commercial fuels. In 1951, the latest year for which detailed calculations have been made, the equivalent of 385 million* tons of coal were consumed by thermal power plants, as follows: coal (72.7%), lignite (7.3%), oil (7.5%), natural gas (7.5%), other gas (3.1%), other fuels, chiefly wood and peat (1.9%).

4. The period 1937-1952 witnessed a sizable increase in the utilization of existing generating facilities. In the world as a whole, output per KW of installed capacity rose by nearly a third, from 3,200 KWH in 1937 to 4,200 KWH in 1952. In 1951, however, output per KW of installed capacity declined slightly. It is possible that this change reflects an improvement in the demand-supply relationship, and an easing of the shortages that prevailed throughout the earlier post-war years.

* These figures do not include the equivalent of 27 million tons of coal used to generate current in industrial establishments in certain countries, and for which no detailed breakdown by type of fuel is available.

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5. The world's mining and manufacturing industries (outside of the USSR, China and North Korea) consumed an estimated 516 billion KWH in 1951, nearly half the total supply of electricity in that year. Of this, 52% was used in the mines and factories of North America, and 39% in those of Europe. The remainder was divided about equally between Japan and the rest of the world. This distribution of industrial energy was in marked contrast with that of 1937, when consumption in industry totalled only 246 billion KWH. In that year, North American industry absorbed 42% of the total compared with Europe's 44%.

6. Per capita use of electric power by industry increased almost universally between 1937 and 1951 to reach an average, in the latter year, of about 280 KWH. Consumption rates in excess of 1,000 KWH per capita were reached in only five countries: Canada, Norway, Sweden, Switzerland and the United States. In Canada and Norway, it exceeded 2,500 KWH per capita. By contrast, fewer than 50 KWH per capita were used in most of the countries of Africa, Latin America and Asia.

7. World consumption of electricity in various forms of transport is estimated at 27 billion KWH in 1951, 50% more than was used for this purpose in 1937, but still less than 3% of the world supply. More than half of the increase took place in Europe, mainly as a result of the trend toward electrification of railways. Similar trends were noted in Asia and Oceania, but on a lesser scale. In North America, on the other hand, the use of electricity in transport rose between 1937 and 1945 but thereafter declined, probably as a result of the substitution of oil-driven busses for trains.

8. Households, commercial establishments, agriculture, and other domestic enterprises in the world as a whole are estimated to have used 300 billion KWH in 1951, 3½ times the amount used in 1937. North America and Europe were responsible for the bulk of this increase. In the former, domestic consumption rose from 45 billion KWH in 1937 to 171 billion in 1951. European consumption during the same period rose from 25 to 76 billion KWH.

9. World per capita use of electricity for domestic purposes averaged about 150 KWH in 1951, exceeding 500 KWH in only Canada, New Zealand, Norway, Sweden, Switzerland and the United States.

10. Details of electricity production by individual countries and major areas are shown in the following tabulation:

WORLD ELECTRIC POWER PRODUCTION
1952 vs. 1951
(Millions of KWH)

	1952			% Increase 1952 vs 1951		
	Total	Hydro	Thermal	Total	Hydro	Thermal
Canada	68,406	63,010	5,396	11.4	11.2	13.3
Mexico	5,337	2,567	2,770	8.7	10.1	7.5
Argentina	4,701	200	4,501	- 0.4	-	- 0.4
Brazil	9,000	8,000	1,000	2.8	3.1	-
Chile	3,744	1,800	1,944	11.4	16.1	7.3
Colombia	1,187	750	437	12.9	7.1	24.5
Cuba	916	13	903	9.6	-	9.7
Peru	970	620	350	9.0	10.7	6.1
Puerto Rico	735	289	446	11.4	18.4	7.2
Uruguay	698	580	118	9.1	7.4	18.0

* Excluding Communist China and North Korea for which no data are available. The above estimates are based on U.N. and private sources.

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	1952			% Increase 1952 vs. 1951		
	Total	Hydro	Thermal	Total	Hydro	Thermal
Venezuela	722	350	372	16.8	16.7	17.0
Other Foreign W. Hemis.	1,805	1,006	799	9.3	1.5	21.0
Total Foreign W. Hemis	98,221	79,185	19,036	9.7	10.2	7.7
Belgium & Luxembourg	10,300	77	10,223	- 0.1	-	- 0.1
Denmark	2,754	34	2,720	8.2	6.3	8.2
France	40,750	22,400	18,350	13.1	9.6	17.7
W. Germany	56,208	9,945	46,263	9.4	9.8	9.4
Italy	30,844	27,107	3,737	5.5	2.9	30.3
Netherlands	8,498	-	8,498	8.7	-	8.7
Norway	18,866	18,726	140	6.8	6.6	42.9
Spain	9,416	7,796	1,620	13.6	12.4	19.6
Sweden	20,693	19,614	1,079	5.7	6.7	- 9.7
Switzerland	12,709	12,583	126	3.8	3.2	125.0
United Kingdom	63,895	1,672	62,223	3.8	8.6	3.7
Other Free Europe	26,837	7,904	18,933	7.8	1.2	10.9
Total Free Europe	299,016	127,824	171,192	6.2	6.2	6.3
Union of South Africa	12,533	-	12,533	7.5	-	7.5
Australia	11,297	1,648	9,649	7.6	6.5	7.7
New Zealand	3,610	3,406	204	4.5	4.5	4.1
India & Pakistan	6,425	3,010	3,415	5.8	3.2	8.2
Japan	51,647	40,327	11,320	8.2	7.5	10.9
Other Free E. Hemis.	13,876	4,452	9,424	11.3	11.0	11.4
Total Free E. Hemis.	399,404	180,667	217,737	6.7	6.5	6.9
Total Free Foreign	497,625	259,852	236,772	7.3	7.6	6.9
United States	463,056	109,708	353,348	6.3	4.8	6.7
Total Free World	959,681	369,560	590,121	6.8	6.8	6.8
USSR	116,400	16,000	100,400	13.0	14.3	12.8
Eastern Europe (Inc. Austria)	62,932	9,345	53,587	10.6	9.0	10.9
Total Communist Area	179,332	25,345	153,987	12.1	12.3	12.1
Total World	1,139,013	394,905	744,108	7.6	7.1	7.9

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